Section XIV: Identification of Dextromethorphan

I. Introduction:

Samples are routinely analyzed by GC/FID and GC/MS. If the mass spectra results are Dextromethorphan, the sample must be analyzed by a microcrystalline test using 10% Platininc Chloride (H_2PtCl_6) and 1% Acetic Acid. This is done because the GC/MS is unable to distinguish between the optical isomers (dextro and levo) of this particular compound. The microcrystalline test does distinguish between the two.

II. Reagents:

A. 10% Platinic Chloride in water
B. 1% Acetic Acid
C. Dextromethorphan Standard

III. Equipment:

A. Magnifying microscope
B. Microscope slides
C. Microcaps (5uL)

IV. Procedure:

A. Place small amount of sample onto a microscope slide.
B. Add 2 drops of 1% Acetic Acid to the sample.
C. Add 5 uL (1 microcap full) of H_2PtCl_6 to the acetic acid.
D. View at 100X; look for branching root-like crystals.
E. If crystals are present, the sample is either Dextromethorphan OR Levomethorphan. Proceed to Step F. If no crystals form, the sample is a mixture of the two, Racemethorphan.
F. If crystals are resent, repeat steps A through D with the addition of the Dextromethorphan standard to the sample.
G. If crystals form, the sample is Dextromethorphan. If crystals do not form, the sample is Levomethorphan.

V. Results:

A. Record results in logbook, as well as the evidence cards. Be sure to include the date of analysis, result, and initials on the evidence cards.

VI. Discussion:

The microcrystalline test must be performed because the GC/MS cannot distinguish between the Dextro and Levo optical isomers. Since Dextromethorphan is not a controlled substance and Levomethorphan is controlled (Class B), the analyst must be sure which form the sample is before reporting results.